DETERMINATION OF HEAVY METALS IN CANNED SARDINES MARKETED IN KUALA PILAH

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ABSTRACT

DETERMINATION OF HEAVY METALS IN CANNED SARDINES MARKETED IN KUALA PILAH

Dry ashing method is applied for the determination of heavy metals (Ni, Pb, Fe and Cu) in canned sardines using Flame Atomic Absorption Spectroscopy (FAAS). Ni, Pb, Fe and Cu in canned sardines were determined and assessed by comparing element levels in these samples with Provisional Tolerable Weekly Intake (PTWI) set by Joint Expert Committee on Food Additives (JECFA). The heavy metal contents, expressed in mg/L or ppm with an average value of 0.063 and 0.039 mg/L for Ni, 0.001, 0.005 and 0.001 mg/L for Pb, 0.943, 4.504 and 1.309 mg/L for Fe and 0.088, 0.257 and 0.088 mg/L for Cu. The determination of Ni, Pb, Fe and Cu were found to be linear and correlation coefficients (R^2) of over 0.99 were obtained. The % RSD for Ni, Fe and Cu were less than 15 % while for Pb was less than 21 % RSD.